Weekly Influenza Surveillance Report

Maryland Department of Health and Mental Hygiene | Infectious Disease and Environmental Health Administration
Office of Infectious Disease Epidemiology and Outbreak Response

SYNOPSIS

Regular reporting of influenza surveillance data in the United States began on October 3, 2010. However, influenza surveillance is done year-round. Over the summer, influenza activity in Maryland was minimal, with few laboratory-confirmed cases. Most of those cases were found to be caused by the 2009 H1N1 pandemic strain of influenza. In the Southern Hemisphere, the predominant flu strain varied by region. In Australia, the H1N1 virus predominated, yet there was a mix of H1N1, H3N2, and type B influenza in South Africa. **All influenza viruses isolated elsewhere in the Southern Hemisphere match the strains contained in the 2010-11 influenza vaccine for the Northern Hemisphere**. During week 40 in Maryland, two hospitalized cases of influenza-like illness (ILI) were reported, with one of them confirmed as having H1N1. Clinical laboratories reported two rapid tests positive for influenza types A and B. With this information, influenza activity in Maryland for week 40 was "**SPORADIC**", with small numbers of laboratory-confirmed influenza and no increase in the proportion of visits to sentinel providers due to ILI.

INFLUENZA-LIKE ILLNESS SURVEILLANCE (ILINet)

A total of seven sentinel providers reported 137 visits (1.6% of all visits) to their practices for ILI during week 40. This low number of reporting providers is expected for the first few weeks of the surveillance season, and we will work with the rest of the providers to get a higher proportion of responses. Last year at this time, the proportion of visits for ILI was 6.6%. A baseline for the current season (2010-11) will be established soon. For more information on the US Outpatient Influenza-like Illness Reporting Network (ILINet), please visit our website: http://dhmh.maryland.gov/fluwatch and click on "ILINet Sentinel Providers".

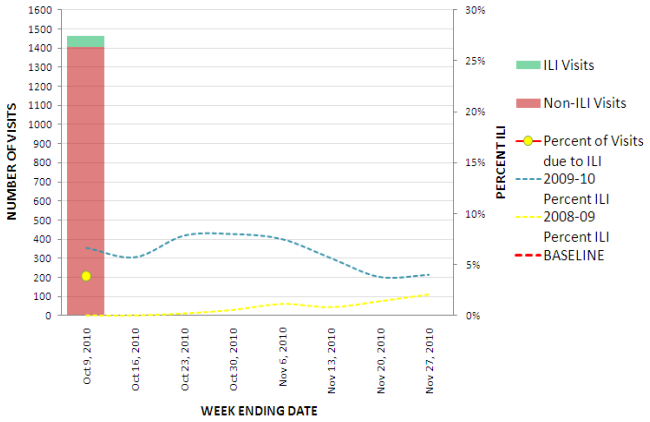

Figure 1. Number of visits and proportion of visits for ILI to ILINet sentinel providers, 2010-11 influenza season

CLINICAL LAB REPORTS OF RAPID FLU TESTING

During week 40, 18 clinical laboratories reported 2 (1.5%) of 131 rapid influenza tests were positive. One was positive for influenza type A, and one was positive for influenza type B. This proportion of positive tests was significantly lower than the proportion reported at this time last year, which was 19.4%.

Early in the season, when influenza is not very prevalent (established) in the community, rapid influenza tests tend to be less accurate than PCR tests or viral culture. So these results should be taken with that caveat.

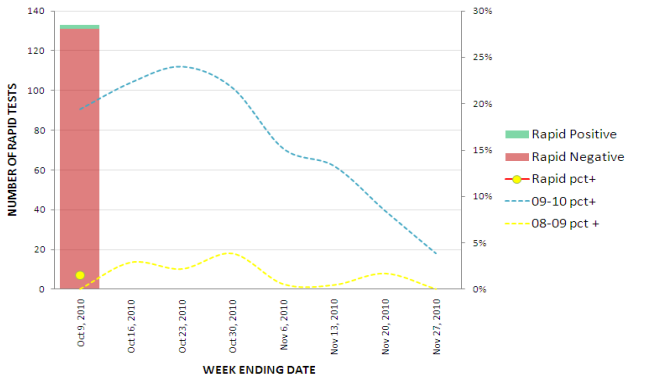

Figure 2. Number and result of rapid tests reported by clinical laboratories, 2010-11 influenza season.

Type of Positives	Number (%)
Type A	0
Type B	0
Positive, but not typed	0
Total Positive	0

Table 1. Number of positive rapid influenza tests, by type, reported by collaborating clinical laboratories, 2010-11 season

GET VACCINATED!

Go to http://dhmh.maryland.gov/swineflu/getVaccinated.html and find your local health department for more information.

MARYLAND RESIDENT INFLUENZA TRACKING SURVEY (MRITS)

During week 40, a total of 713 (46% of total) participants in the MRITS responded to the weekly survey. Of those who responded, 40 (5.6%) reporting flu-like illness. This is a proportion similar to this same week last season, when 5.7% of respondents then reported flu-like illness.

We are always looking for more participants for the MRITS. If you know someone who would like to participate, please direct them to our website: http://dhmh.maryland.gov/flusurvey. A mobile version of the site and other improvements are on the way.

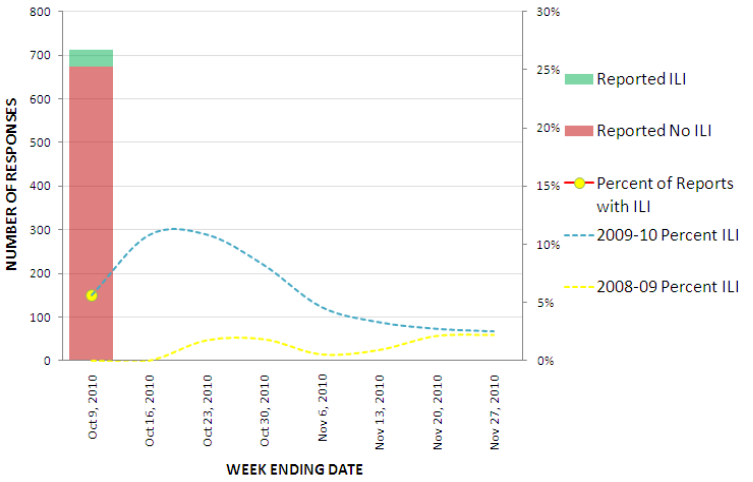

Figure 3. Number of responses and proportion reporting ILI to the MRITS by week, 2010-11 influenza season.

DHMH LABS ADMINISTRATION REPORTS

The DHMH Laboratories Administration reported a total of 18 PCR tests for influenza performed during week 40. None of those were positive.

During the 2009-10 influenza season, the DHMH Labs Administration reported over 1,900 positive PCR tests for influenza, with 99% of them being the H1N1 pandemic strain. At one point last season, the lab performed over 1,000 tests in one week, and over half of those tests were positive.

Whenever possible, negative PCR samples are put in culture to isolate and identify any other viruses present. Other viruses identified in the past have been rhinovirus, adenovirus, and even herpes simplex viruses.

Influenza Type	Number (%)
TYPE A	**0**
H1N1	**0**
Seasonal H1	**0**
H3	**0**
Unsubtyped	**0**
TYPE B	**0**
TOTAL	**0**

Table 1. Number of respiratory samples positive for influenza by PCR reported by the DHMH Labs Administration, 2010-11 influenza season

EIP INFLUENZA HOSPITALIZATION SURVEILLANCE

During week 40, two hospitalizations associated with influenza were reported to the Emerging Infections Program (EIP). One person hospitalized was in the 25-49 age range, while the other was over the age of 65.

To be a confirmed hospitalization associated with influenza, the person must be hospitalized and have a positive influenza test of any kind (rapid test, PCR, culture).

This week last year, a total of 148 hospitalizations were reported. During the 2009-10 influenza season, over 1,400 hospitalizations associated with influenza were reported to EIP.

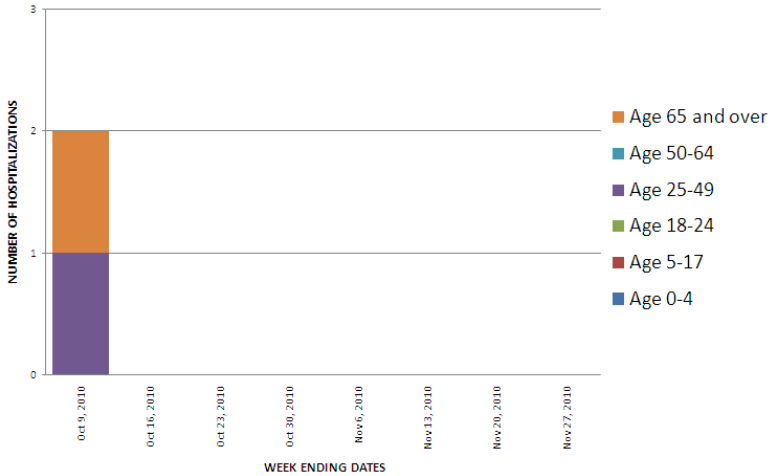

Figure 4. Number of hospitalizations associated with influenza, by age group and week, reported to the Emerging Infections Program, 2010-11 influenza season

DID YOU KNOW?

The CDC's Advisory Committee on Immunization Practices recommended for vaccinating everyone 6 months and older in the United States during the 2010-11 influenza season. Vaccination is especially important in people with weakened immune systems, those with chronic lung conditions, pregnant women, and other high risk groups. Vaccination is also important for those who take care of a person who falls into one of the high risk groups. Vaccination is a group effort to keep the most number of people possible free from influenza and its complications.

REPORTS OF OUTBREAKS IN INSTITUTIONAL SETTINGS

No outbreaks of influenza, influenza-like illness, or pneumonia were reported to DHMH during week 40. Last season, a total of 208 outbreaks of respiratory illness were reported between week 40 of 2009 and week 20 of 2010. Of those, 33 were confirmed as influenza outbreaks. Institutional settings include schools, hospitals, colleges and universities, and long-term care locations. An outbreak of ILI is re-classified as an outbreak of influenza if there is laboratory evidence of influenza virus present in the samples collected from case-patients in the outbreak.

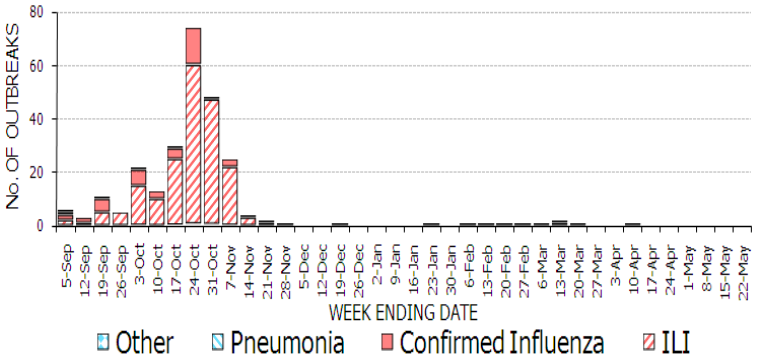

Figure 5. Number of outbreaks reported by week and by type during the 2009-10 influenza season. There have been no outbreaks of respiratory disease reported, 2010-11 influenza season.

EMERGENCY DEPARTMENT ILI REPORTS (ESSENCE)

During week 40, a total of 40,547 visits to emergency departments for all reasons were reported to the Office of Preparedness and Response through the ESSENCE system. Of those visits, 402 (1%) were for influenza-like illness. This is about the same proportion reported at this time during the 2008-09 influenza season, and lower than the 7% reported at this time last season.

For more information on ESSENCE, please visit the Office of Preparedness and Response's web site at: http://bioterrorism.dhmh.state.md.us.

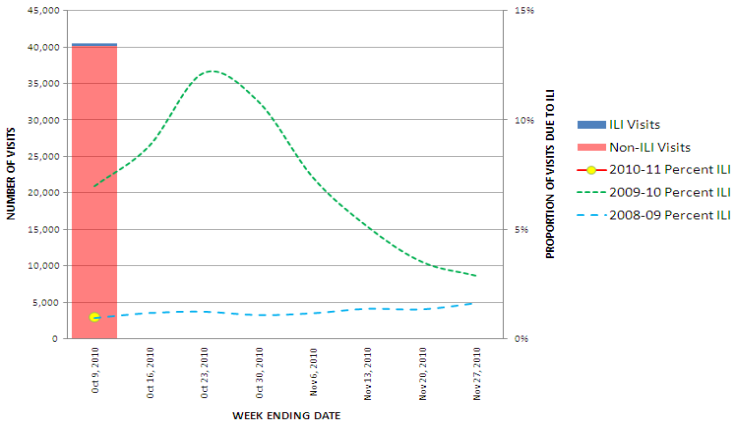

Figure 6. Number and proportion of visits to emergency departments for ILI by week reported through ESSENCE, 2010-11 influenza season.

GOOGLE FLU TRENDS

According to Google, influenza activity in Maryland is currently "**LOW**". What does this mean? From the Google Flu Trends Website: "We have found a close relationship between how many people search for flu-related topics and how many people actually have flu symptoms. Of course, not every person who searches for 'flu' is actually sick, but a pattern emerges when all the flu-related search queries are added together. We compared our query counts with traditional flu surveillance systems and found that many search queries tend to be popular exactly when flu season is happening. By counting how often we see these search queries, we can estimate how much flu is circulating in different countries and regions around the world."

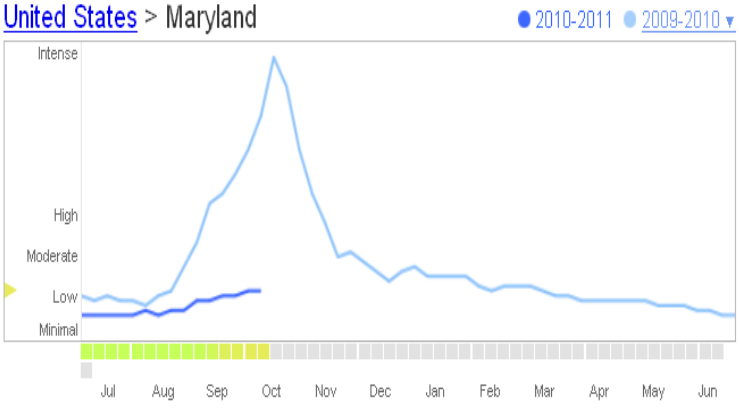

Figure 7 – According to Google Flu Trends, influenza activity in Maryland is currently "low". At this time last year, during the 2009 H1N1 influenza pandemic, influenza activity in Maryland was "high" to "intense".

DID YOU KNOW?

According to CDC, a person infected with influenza may pass it on to others **1 day before** symptoms begin to appear and as late as **5 to 7 days after** symptoms appear. Children and those with weak immune systems may be contagious for longer periods of time. So stay home if you're sick, and don't go back until you're better. Easier said than done, but think of how many people you come into contact with on the metro, at work, and on the street. Of course, you could just get vaccinated and reduce your chances of getting sick with the flu to begin with…

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THE INFORMATION INCLUDED IN THIS REPORT IS NOT INTENDED TO BE USED FOR INDIVIDUAL DIAGNOSES.

ONLINE VERSION OF THIS REPORT AND PAST SEASONS' REPORTS MAY BE DOWNLOADED AT:

DHMH.MARYLAND.GOV/FLUWATCH

FLU SURVEILLANCE IN NEIGHBORING STATES:

DELAWARE-

HTTP://BIT.LY/9Zkp3

DC-

http://tinyurl.com/yj7br9e

PENNSYLVANIA-

http://tinyurl.com/37323xn

VIRGINIA-

http://tinyurl.com/kmnaeu

WEST VIRGINIA-

http://tinyurl.com/2u53nuc

CDC NATIONAL INFLUENZA SURVEILLANCE REPORT (http://cdc.gov/flu/weekly)

Influenza A (H3N2), 2009 influenza A (H1N1), and influenza B viruses co-circulated at low levels in the United States during the summer months. During week 40 (October 3-9, 2010), influenza activity was low in the U.S.

- Forty-five (3.3%) specimens tested by U.S. World Health Organization (WHO) and National Respiratory and Enteric Virus Surveillance System (NREVSS) collaborating laboratories and reported to CDC/Influenza Division were positive for influenza.
- The proportion of deaths attributed to pneumonia and influenza (P&I) was below the epidemic threshold.
- No influenza-associated pediatric deaths were reported.
- The proportion of outpatient visits for influenza-like illness (ILI) was below the national baseline. All 10 regions reported ILI below region-specific baseline levels and all 48 states with sufficient data experienced minimal ILI activity.
- Geographic spread of influenza in the District of Columbia, Guam, Puerto Rico, and 19 states was assessed as sporadic, 31 states reported no influenza activity and the U.S. Virgin Islands did not report.